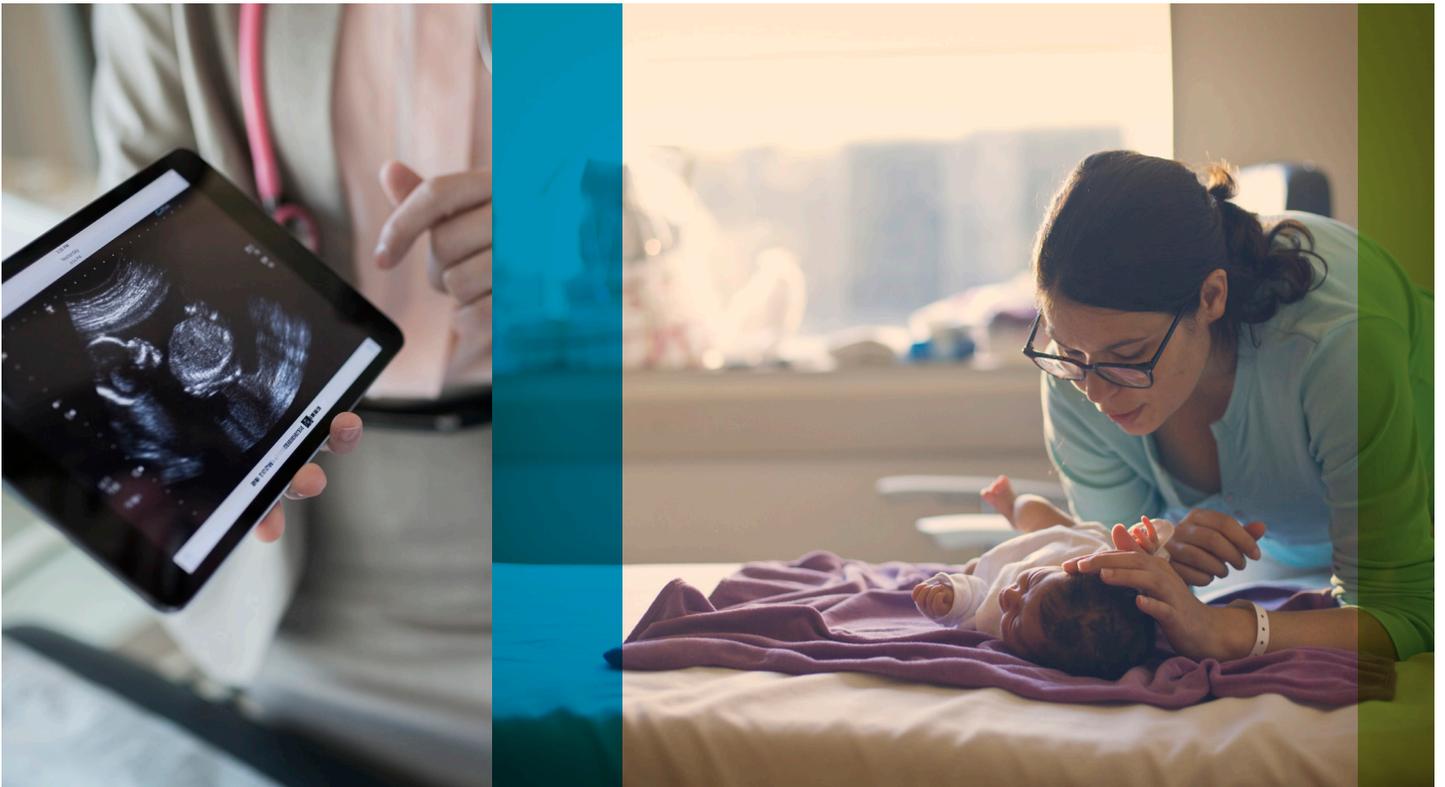


# Healthy Pregnancy, Healthy Baby

Being and Feeling Your Best  
for You and Your Baby



# Table of Contents

<b>Welcome!</b>	<b>1</b>	<b>Giving Birth (Labour and Delivery)</b>	<b>8</b>
<b>Preparing Yourself for a Healthy Pregnancy</b>	<b>1</b>	Signs of labour	8
Prenatal Care	2	Natural birth vs. caesarean section	8
Scheduling an appointment with your healthcare provider	2	Safely preventing C-sections	9
Health history	2	<b>After Delivery</b>	<b>9</b>
Start taking folic acid (vitamin B)	2	Recovering from delivery	9
Vaccinations and prescription drugs	2	Breastfeeding and pumping milk	9
Things to avoid: drinking, smoking, drugs and environmental contaminants	2	Feeding your baby formula	10
Losing weight	2	Rest	10
<b>Being Pregnant</b>	<b>4</b>	Nutrition	10
Making regular appointments with your doctor or healthcare provider	4	Losing pregnancy weight	10
Maintaining a healthy weight	4	Becoming a New Parent	10
Food cravings and aversions	4	<b>Footnotes</b>	<b>11</b>
Morning sickness	4		
Nutrition and making good food choices	4		
Food variety	4		
Eat some things sparingly	4		
Smaller portions and slower eating	4		
Stay hydrated (with water)	5		
Think fibre, legumes and dark green leafy vegetables	5		
Foods that contain calcium	5		
Foods that contain iodine	5		
Foods that contain vitamin A	5		
Foods that contain vitamin C	5		
Lean meats and fish	5		
Exercise	5		
Dealing with depression and anxiety	6		
Trimesters of pregnancy	7		

# Welcome!

Pregnancy is a relationship like no other— an intimate bond with you and your baby. It’s also a shared experience with your family and friends. The pregnancy journey is even part of your work— how you feel and function.

This booklet is dedicated to moms-to-be. It’s written for you, wherever you are in your pregnancy journey, whether you are:

- Thinking about a baby in the future
- Already pregnant with your first child
- Pregnant and have other children

Everything in this booklet is intended to provide an additional perspective on being the healthiest person that you can be— before, during and after your pregnancy. We hope you will find this information useful. Every pregnancy is different, so we cannot offer specific advice to your own pregnancy but we offer a lot of information on a variety of topics related to pregnancies. We encourage you to use this to help you talk to your own healthcare provider, particularly if you have additional questions.

## The Important Role of Your Healthcare Provider

Throughout this guide, you’ll see many references to your doctor or healthcare provider. The important thing is to find a healthcare provider that you like and trust. Why is this relationship so important?

Here are just a few of the ways that your doctor or healthcare provider could play an important role in your pregnancy:

- Counselling you on any existing health issues (such as high blood pressure or smoking) that could adversely affect your pregnancy
- Recommending treatment or lifestyle changes to address any health issues
- Reviewing your family history to see if there are any risk factors
- Prescribing prenatal vitamins (if needed) to make sure you’re getting crucial nutrients to support your pregnancy
- Checking your vaccination history to make sure you have the vaccinations you need
- Checking the progress of your pregnancy to help protect against potential complications, such as gestational diabetes, hypertension (high blood pressure) and preeclampsia
- Checking on the development of your baby
- Answering questions you have throughout your pregnancy to help your peace of mind
- Delivering your baby and caring for you before you are discharged from the hospital

We have divided the pregnancy experience into four chapters:

1. Preparing yourself for a healthy pregnancy
2. Being pregnant
3. Giving birth
4. Post-delivery care

# Preparing Yourself for a Healthy Pregnancy

Have you ever trained for a sporting event? Or taken a class to prepare for a specific job?

Being pregnant demands a lot from not only your body, but also your mind and emotions. You can prepare yourself just as you would for any other significant effort in your life. As soon as you begin thinking about starting (or expanding) your family, you want to start a healthy pregnancy plan.

In the past, we didn’t have the scientific knowledge to fully understand how pregnancy affects women. Now we know your baby depends on you for everything— safety, nourishment, blood and air. Preparing physically and emotionally for your pregnancy is also doing the best for your baby.

What can you do even before you’re pregnant to prepare? The following table provides a summary of some practices to consider. There are more details about each throughout this entire booklet.

## Things to Embrace and Things to Avoid

Do	Don't
<ul style="list-style-type: none"> <li>• Schedule a prenatal check-up with your healthcare provider</li> <li>• Eat healthier foods</li> <li>• Take prenatal vitamins if advised by your healthcare provider</li> <li>• Starting taking folic acid, a B vitamin</li> <li>• Begin exercising moderately and regularly</li> <li>• Consult your doctor about the vaccinations you may need</li> <li>• Get plenty of sleep</li> </ul>	<ul style="list-style-type: none"> <li>• Don't smoke</li> <li>• Don't take recreational (street) drugs</li> <li>• Don't drink alcohol</li> <li>• Don't overeat (talk to your healthcare provider about what a healthy weight is for you)</li> <li>• Avoid toxic substances in your environment</li> </ul>

## Prenatal Care

Many women think that their first visit to a healthcare provider should be to confirm pregnancy. Actually, prenatal care should begin *before* you become pregnant. This is sometimes called “preconception health.” Prenatal care is not just for women who are considering pregnancy for the first time. Even if you already have other children and never thought about prenatal care with those pregnancies, you should still consider prenatal care now for your next child. Prenatal care can be even more important for women who have had multiple births.<sup>1</sup>



## Scheduling an appointment with your healthcare provider

When you decide if there will be a baby in your future, make an appointment with your healthcare provider in the present. This is a sample of things you may expect (and might want to request) during a check-up:

### Health history

If you have any health issues that might affect your pregnancy, your healthcare provider will want to discuss those with you. These are some examples of conditions that your doctor may screen you for:<sup>2</sup>

- Anaemia
- High blood pressure
- Diabetes
- Rh factor incompatibility
- Toxoplasmosis
- Hepatitis B
- HIV and other sexually transmitted diseases
- Immunity to rubella (German measles) and chickenpox

If you do have an existing condition, such as diabetes, your healthcare provider will want to work closely with you to make sure it is well managed throughout your pregnancy.

Share what you know about your family’s medical history, too. Your healthcare provider should be aware of anything that could possibly lead to pregnancy complications.

### Start taking folic acid (vitamin B)<sup>3</sup>

Studies have called folic acid a “pregnancy superhero!”<sup>4</sup> It’s a prenatal vitamin that some suggest to start taking even before you’re pregnant.<sup>4</sup> It’s a man-made form of a B vitamin called *folate*, which helps in the production of red blood cells.<sup>4</sup> Why take folic acid when you’re thinking about getting pregnant? Research suggests that birth defects occur within the first 3-4 weeks of pregnancy and folic acid can help support proper development of your baby’s brain and spinal cord.<sup>4</sup> Some studies have recommended taking 400 micrograms (mcg) of folic acid daily before even trying to conceive.<sup>4</sup>

### Vaccinations and prescription drugs<sup>5</sup>

There are certain vaccinations that your healthcare provider may advise you to get prior to trying to conceive, such as those for whooping cough and flu (in some parts of the world).<sup>6</sup> If you haven’t been vaccinated against rubella and chickenpox and never had these diseases as a child, your healthcare provider may advise that you also be vaccinated against these diseases, as they can both cause birth defects.<sup>6</sup> Your doctor may recommend the meningococcal vaccine if you work in a lab, or if you are traveling to a country where you may be exposed to meningococcal disease.<sup>6</sup>

Your doctor may also advise you to review any medications you are currently taking. You want to be sure that these medications are safe for your baby. Bring a list with you to your doctor with every medication or supplement that you are taking so your doctor can make this assessment for you.

## Things to avoid: drinking, smoking, drugs and environmental contaminants

There is a wealth of research about the harmful effects of drinking, smoking and taking recreational or street drugs when you’re pregnant.<sup>7,8,9</sup> Risks to your baby include low birth weight, premature birth, birth defects, addiction at birth and even death.<sup>7,8,9</sup>

Be aware of substances in your environment that can also be harmful. Avoid working with or handling things like:

- Garden products, such as fertilizers and insecticides
- Cat faeces (let someone else clean out the litter box)
- Cleaning products with ammonia and chlorine
- Lead

Exposure to these substances can hurt your reproductive system and make it more difficult to get pregnant.<sup>7,8,9</sup> Even small amounts of exposure could lead to diseases that could make you sick and affect your unborn child.

The World Health Organization (WHO) suggests there is no ideal weight for pregnancy. There are of course general recommendations for a healthy weight, but this should be a discussion with your healthcare provider. Extra weight can lead to a difficult and uncomfortable pregnancy. It can also contribute to high blood pressure, heart disease, type 2 diabetes and even certain cancers (breast, colon and endometrial).<sup>10</sup>

If you and your doctor agree that you are carrying too much weight, you may be advised to lose weight before you conceive. Because the safest weight loss is always gradual, you want to give yourself enough time to lose the amount of weight that you need to before becoming pregnant.

The following chart provides a general idea of pre-pregnancy weight ranges based on height. To determine your own ideal weight you may also want to take into consideration your age and physical body type. We would suggest using this chart as a starting point for a discussion with your healthcare provider. Your healthcare provider may evaluate your weight based on your Body Mass Index (BMI), which measures body fat based on height and weight. The BMI measurement is simply another way that healthcare providers may evaluate healthy weights. This chart is only meant as a guide before your pregnancy.

BMI Value	Normal Weight						Overweight					Obese					
	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35
<b>Height cms (meters)</b>	<b>Body Weight (kilograms/kg)</b>																
147 cm (1.47 m)	41	44	45	48	50	52	54	56	59	61	63	65	67	69	72	73	76
150 cm (1.50 m)	43	45	47	49	52	54	56	58	60	63	65	67	69	72	74	76	78
152 cm (1.52 m)	44	46	49	51	54	56	58	60	63	65	67	69	72	74	76	79	81
155 cm (1.55 m)	45	48	50	53	55	57	60	62	65	67	69	72	74	77	79	82	84
157 cm (1.58 m)	47	49	52	54	57	59	62	64	67	69	72	74	77	79	82	84	87
160 cm (1.60 m)	49	51	54	56	59	61	64	66	69	72	74	77	79	82	84	87	88
163 cm (1.63 m)	50	53	55	58	61	64	66	68	71	74	77	79	82	84	87	89	93
165 cm (1.65 m)	52	54	57	60	63	65	68	71	73	76	79	82	84	87	90	93	95
168 cm (1.68 m)	54	56	59	62	64	67	70	73	76	78	81	84	87	90	93	95	98
170 cm (1.70 m)	55	57	61	64	66	69	72	75	78	81	84	87	90	93	96	98	101
172 cm (1.72 m)	57	59	63	65	68	72	74	78	80	83	86	89	92	95	98	101	104
175 cm (1.75 m)	58	61	64	68	70	73	77	80	83	86	89	92	95	98	101	104	107
178 cm (1.78 m)	60	63	66	69	73	76	79	82	85	88	92	95	98	101	104	107	110
180 cm (1.80 m)	62	65	68	71	75	78	81	84	88	91	94	98	101	104	107	110	113
183 cm (1.83m)	64	67	70	73	77	80	83	87	90	93	97	100	103	107	110	113	117
185 cm (1.85 m)	65	68	72	75	79	83	86	89	93	96	99	103	107	110	113	117	120
188 cm (1.88 m)	67	70	74	78	81	84	88	92	95	99	102	106	109	113	116	120	123
191 cm (1.91 m)	69	73	76	80	83	87	91	94	98	102	105	109	112	116	120	123	127
193 cm (1.93 m)	71	74	78	82	86	89	93	97	100	104	108	112	115	119	123	127	130

Source: National Heart, Lung and Blood Institute, "Clinical Guidelines on the Identification, Evaluation and Treatment of Overweight and Obesity in Adults: The Evidence Report," September 1998

## Being Pregnant

### Making regular appointments with your doctor or healthcare provider

If you think you are pregnant, one of the first things the National Institute of Child Health and Human Development (NICHD) in the United States recommends doing is making an appointment with your healthcare provider. At this first visit, you will probably have:

- A thorough physical
- A pelvic exam
- A urine analysis
- Blood tests
- Weight check

This will be the first in a series of appointments to monitor your health and the development of your baby. NICHD advises to make these appointments with your healthcare provider a priority throughout your pregnancy.<sup>11</sup>

### Cravings that Signal a Nutritional Deficiency

If you find that you have the urge to eat non-food substances, like clay, ashes or laundry starch, call your healthcare provider.

This type of craving could be a symptom of a nutritional deficiency.<sup>12</sup> Your doctor may want to do some blood tests to check this and then prescribe supplements.

### Maintaining a healthy weight

Of course, you will gain weight during your pregnancy! Many women fret about gaining too much weight, while others feel like they should eat what they want for their baby's sake. Based on suggestions from the Ministry of Health of New Zealand, here are some guidelines for healthy weight gain that you can follow:

- Consume about 300 more calories per day than you did before you became pregnant<sup>13</sup>
- Ideally, gradually gain weight throughout your pregnancy<sup>13</sup>
- According to the Institute of Medicine in the United States, aim to gain less than 2 kilogram (kg) in the first trimester and up to 2 kilograms each month in the second and third trimesters.<sup>13</sup>

Just to reiterate, these are suggestions from the Ministry of Health of New Zealand. You and your healthcare provider should set goals that are realistic and healthy for you. Remember, too, that weight management during pregnancy is not about dieting— it's about making better (healthier) food choices and exercising moderately and regularly. Think about doing *more* for yourself rather than *depriving* yourself.

### Food cravings and aversions

Some moms-to-be experience cravings within the first four months of pregnancy. Others may develop an intense dislike for a dish that they used to love. No one knows exactly why this happens. It may be related to hormones or it may be the body's way of trying to get the nutrition it needs.<sup>14</sup> While this response to food is entirely natural, studies suggest you try to turn cravings and aversions to your advantage— both yours and your baby's. Here are a few ideas:

- If a craving isn't nutritionally healthy, studies suggest to try to appease your body's demands with a modified version. For example, if you have an intense urge for chocolate, try drinking a glass of low-fat chocolate milk instead of eating a chocolate bar.<sup>14</sup>
- Distraction can help, too. Sometimes cravings pass as suddenly as they come. Try taking a walk before you reach for the chocolate bar. You may find that the craving has passed by the time you get back from the walk.

### Morning sickness

If you have morning sickness, you may not have much choice about what you can eat. A healthy diet may be your friend when you have morning sickness. Oatmeal, for example, might help settle your stomach and it's a great food choice because of the high fibre content. Researchers suggest avoiding fatty foods, which may also be both a healthy choice and a better choice for a delicate stomach.<sup>15</sup>

### Nutrition and making good food choices

Even if you eat healthy now, there may be better choices you can make when you're pregnant (to support the development of your baby). Studies suggest the following as general guidelines on healthy eating:<sup>15</sup>

#### Food variety

Your doctor can advise you to eat a variety of foods to get all the nutrients needed including breads and grains, fresh fruits and vegetables, dairy products and protein sources such as meat, poultry, fish, eggs or nuts.

#### Eat some things sparingly

Use fats, sweets and salt cautiously.<sup>15</sup>

#### Smaller portions and slower eating

Bloating is a common problem with pregnancy, but it's actually a necessary part of a healthy pregnancy. Your body produces a hormone called progesterone, which supports your baby's development by slowing digestion so that the food you eat has more time to be digested and reach your baby.<sup>16</sup> This process also has the unfortunate side effects for you, the mom, of bloating and gassiness.

Your doctor may recommend you choose smaller portions and eat more slowly to help reduce these feelings. They may also advise you to switch from three large meals a day to five or six small meals spread out across the day.

### Stay hydrated (with water)

Drinking water is always good for your body, but especially important during pregnancy. It can help with your digestive process, which can help alleviate both bloating and constipation.<sup>17</sup>

### Think fibre, legumes and dark green leafy vegetables

Dark green leafy vegetables and legumes (lima beans, black beans, black-eyed peas and chickpeas) are excellent sources of folate and fibre. If you have trouble eating these types of food, talk to your doctor about taking folic acid, which is a man-made supplement that ensures you get the same benefits.<sup>18</sup>

There are many excellent sources of fibre, in addition to vegetables and legumes. Ask your healthcare provider for the number of grams of fibre you should try to consume in a day. Here are a few examples of portion sizes:<sup>19</sup>

- One cup of raspberries = 8.0 grams of fibre
- One medium pear with skin = 5.5 grams of fibre
- One cup of instant oatmeal = 4.0 grams of fibre
- One cup of cooked brown rice = 3.5 grams of fibre
- One medium banana = 3.1 grams of fibre

**Caution:** If you're not used to eating high fibre foods and dark leafy greens, you should introduce them into your diet gradually. These foods can help with constipation, but make you gassy if you're not used to them.

Your healthcare provider may recommend the following foods to be included in your nutrition:

#### Foods that contain calcium

Choose from a variety of calcium-rich foods (also a good source of iodine) including cheese, dark leafy greens, milk and yogurt.

#### Foods that contain iodine

Choose from a variety of dairy products including beans, cheese, milk, potatoes and yogurt.

#### Foods that contain vitamin A

Choose at least one source of vitamin A every other day. Sources of vitamin A include apricots, beet greens, cantaloupe, carrots, pumpkins, spinach, sweet potatoes, turnip greens and water squash.

#### Foods that contain vitamin C

Choose at least one good source of vitamin C daily, such as broccoli, Brussels sprouts, cauliflower, grapefruits, green peppers, honeydew, mustard greens, oranges, papaya, strawberries and tomatoes.

### Lean meats and fish

Choose from beans, lean meats (any type of meat that is low in fat) and spinach. In general, white meat is a better "lean" choice than red meat; although you might want to consider taking the skin off before eating. Choose ground meat that is 90-95% lean.

How you prepare your meat can also reduce the fat content. For example, roasting, grilling and braising are all better alternatives to frying foods.

Most seafood is considered lean, although there are some fish that are considered fatty. Your healthcare provider may tell you not to eat raw fish or sushi while you're pregnant.

### Check with Your Healthcare Provider before Starting (or Continuing) Exercise

In general, exercise during pregnancy is beneficial. Nevertheless, your healthcare provider may limit or even advise against exercise (or certain types of exercise) because of pregnancy risks, such as:

#### Medical problems<sup>20</sup>

- Asthma
- Heart disease
- Diabetes

#### Pregnancy-related conditions<sup>20</sup>

- Bleeding or spotting
- Low placenta
- High risk of miscarriage
- Previous premature births or history of early labor
- Weak cervix

### Exercise

Exercise is generally great for you and for your baby. It can help alleviate fatigue and relieve stress. It can also help build stamina and strength to support you through labour and delivery. There is even research that suggests physical activity may prevent gestational diabetes (diabetes that develops during pregnancy).<sup>21</sup>

## High-risk Pregnancy and Complications

We'll only touch on these important topics briefly, as these are issues to discuss with your healthcare provider. The information we're providing here is just to make you aware of these potential problems as a starting point for those discussions.

**High-risk pregnancy:** A doctor may classify yours as a high-risk pregnancy based on a wide range of factors. This generally means that you will be monitored more closely throughout your pregnancy. Following is a list of possible conditions that can contribute to a high-risk pregnancy, but, again, not all of these conditions automatically mean you have added risk:<sup>19</sup>

- Past miscarriages
- Problems in a past pregnancy (such as preterm labour or preeclampsia)
- Active infection (such as HIV or hepatitis C)
- Health conditions (such as diabetes, cancer or high blood pressure)

**Complications:** Talk to your healthcare provider to understand these complications. Contact your doctor immediately if you have any of the symptoms associated with any of these conditions:<sup>19</sup>

- Miscarriage
- Premature labour and birth
- Preeclampsia
- Low amniotic fluid
- Gestational diabetes
- Ectopic pregnancy
- Placenta previa

Research recommends at least 30 minutes of moderately intense exercise every day of the week.<sup>19</sup> If you were physically active before your pregnancy, you may be able to continue your activity, but please consult with your doctor first. You may need to moderate your exercise program. Your healthcare provider may also advise you to substitute low-impact exercise (such as walking) for high-impact exercise (such as running). However, this may depend on your current level of fitness and if you have any pregnancy-related issues that would make high-impact exercise potentially harmful to you and your baby.

If you have never exercised regularly before, you may begin an exercise program during pregnancy only after consulting with your healthcare provider. In the previous sections, we've talked about how exercise can help you manage your weight. This is true, but it's not advisable to start doing strenuous types of exercise as a way of keeping your weight down, particularly if your body is not already well conditioned to this level of exercise.

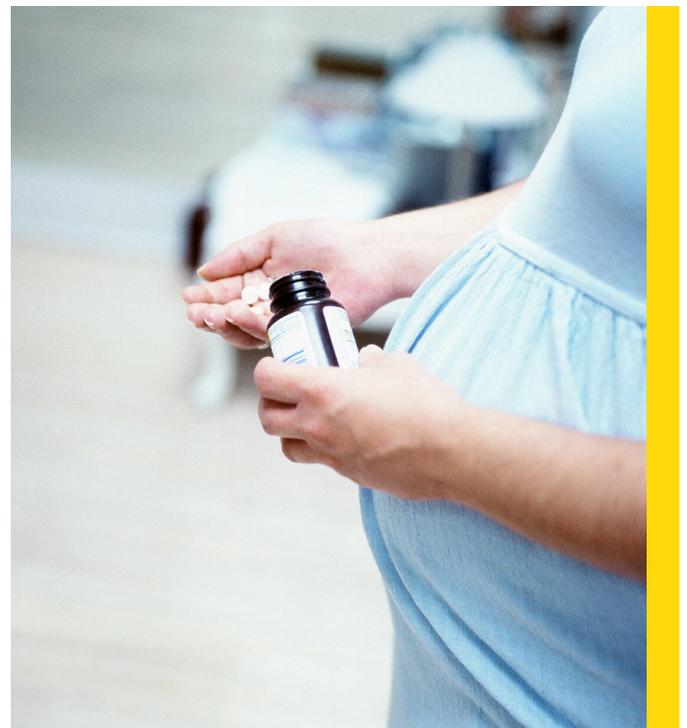
## Dealing with depression and anxiety

You're thrilled about your pregnancy, but sometimes you may feel overwhelmed and sad. People may tell you that these are just pregnancy hormones affecting your mood. You may try to cope with these feelings, but don't dismiss or live with persistent sadness or anxiety that just won't go away.

In the past, research showed that almost 15% of pregnant women suffered from bouts of depression in economically developed countries, with almost 25% in economically developing countries.<sup>22</sup> These conditions can affect your ability to care for yourself and your developing baby. Emotions play such an important role in your pregnancy health that they can even increase your risk for preterm labour.<sup>22</sup>

If you can, share your feelings and fears with your partner. Try talking to close friends and family members for support. Other moms-to-be can be a great source of support, as they are probably experiencing the same worries you are.

Unfortunately, not everyone understands the dangers of depression during pregnancy. Consequently, some well-meaning friends or family could give you bad advice. Remember that your experience is not the same as someone else's and what *you* are feeling is very real. This is important. Talk to your healthcare provider so you can have this addressed properly, including possibly a referral to someone trained to help with this very issue.



### Trimesters of pregnancy

A full-term pregnancy ranges from 37-42 weeks.<sup>23</sup> Pregnancies are typically divided into three trimesters with each trimester lasting between 12 and 14 weeks.<sup>23</sup> During each trimester, your baby will go through many changes and you will likely experience changes, too, including certain unpleasant symptoms, which can be normal and (fortunately) temporary. It may help you to be aware of these. While there is much more detail available about the development of your baby between trimesters, the following chart provides an overview of some of those changes.

**Note:** The list of symptoms for moms-to-be is general and not comprehensive. You may not experience all of these symptoms.

First Trimester (Weeks 1 –12)	Second Trimester (Weeks 13–28)	Third Trimester (Weeks 29 –40)
<p><b>Mom</b></p> <ul style="list-style-type: none"> <li>• Tender, swollen breasts</li> <li>• Upset stomach</li> <li>• Cravings for or aversions to certain foods</li> <li>• Mood swings</li> <li>• Constipation</li> <li>• Frequent urination</li> <li>• Headache</li> <li>• Heartburn</li> <li>• Weight gain or loss</li> </ul> <p><b>Baby (by 12 weeks)</b></p> <ul style="list-style-type: none"> <li>• Nerves and muscles begin to work together</li> <li>• External sex organs show if your baby is a boy or girl</li> <li>• Eyelids close; head growth slows</li> </ul>	<p><b>Mom</b></p> <ul style="list-style-type: none"> <li>• Body aches</li> <li>• Stretch marks</li> <li>• Darkening skin around nipples</li> <li>• Pregnancy mask (darker skin on areas of the face)</li> <li>• Numb or tingling hands</li> <li>• Itching on abdomen, palms and soles of feet*</li> <li>• Swelling of ankles, fingers and face**</li> </ul> <p><b>Baby (by 24 weeks)</b></p> <ul style="list-style-type: none"> <li>• Bone marrow begins to make blood cells</li> <li>• Footprints and fingerprints formed</li> <li>• Lungs are formed but don't work</li> <li>• Hair begins to grow</li> </ul>	<p><b>Mom</b></p> <ul style="list-style-type: none"> <li>• Shortness of breath</li> <li>• Heartburn</li> <li>• Swelling of ankles, fingers and face**</li> <li>• Rapid weight gain**</li> <li>• Hemorrhoids</li> <li>• Tender breasts (may leak with watery pre-milk)</li> <li>• Insomnia</li> <li>• Contractions (real or false labor)</li> </ul> <p><b>Baby (at 37 – 40 weeks)</b></p> <ul style="list-style-type: none"> <li>• Organs are ready to function independently of yours</li> <li>• Head-down position for birth</li> </ul>

\* Call your health care provider if you have nausea, loss of appetite, vomiting, jaundice or fatigue combined with itching. These can be signs of a serious liver problem.

\*\*If you notice any sudden or extreme swelling or if you gain a lot of weight quickly, call your health care provider right away. This could be a sign of preeclampsia, a condition that causes high blood pressure and problems with the kidneys and other organs.

Source: U.S. Department of Health and Human Services, "Pregnancy: Stages of pregnancy," September 2010



# Giving Birth (Labour and Delivery)

## Signs of labour

There's no way to predict exactly when your labour will begin. Your body actually prepares for labour as much as a month before you deliver your baby so you may begin to notice new symptoms as your due date approaches. The American College of Obstetricians and Gynecologists suggests the following are signs that your body may be preparing for, or is already in labour:

- **Your baby “drops.”** A few weeks before your labour begins, you may feel less pressure just below your ribcage, making it easier to catch your breath. This is because your baby now rests lower in your pelvis.<sup>24</sup>
- **You have more Braxton Hicks contractions.** More frequent and intense Braxton Hicks contractions (sporadic uterine contractions can signal pre-labour). You may also experience menstrual-like cramps during this time.<sup>24</sup>
- **Your cervix starts to change.** In the days and weeks before delivery, changes in the connective tissue of your cervix make it soften and eventually thin and widen, or dilate. When you're at or near your due date, your healthcare provider may do a vaginal exam to see whether your cervix has started to change.<sup>25</sup>
- **You pass your mucus plug or notice “bloody show.”** If your cervix begins to efface significantly or dilate as you get close to labour, you may pass your mucus “plug,” which is the small amount of thickened mucus that has sealed off your cervical canal for the last nine months. The plug may come out in a lump all at once or as an increased amount of vaginal discharge over the course of several days. The mucus may be tinged with brown, pink or red blood.<sup>24</sup>
- **Your contractions become increasingly intense.** Unlike Braxton-Hicks contractions, labour contractions grow stronger, longer and more frequent as they cause your cervix to dilate.<sup>24</sup>
- **Your water breaks.** When the fluid-filled amniotic sac surrounding your baby ruptures (which is part of labour), fluid leaks from your vagina. Whether it comes out in a large gush or a small trickle, this is a signal that it's time to call your healthcare provider. Most women start having regular contractions before their water breaks, but in some cases, the water breaks first. When this happens, labour usually follows soon after.<sup>25</sup>

## Natural birth vs. Caesarean section

Before your delivery date, your healthcare provider will most likely discuss delivery options. Most babies are born vaginally, which is why this is typically referred to as a “natural” birth.

During labour, the uterus contracts regularly to thin and open the cervix and push the baby out through your birth canal.<sup>25</sup> Most pregnant women with no risk factors for problems during labour or delivery have their babies “naturally.”

WHO recommends that pregnant women plan for a vaginal birth unless there is a medical reason for a caesarean section (C-section).<sup>26</sup> Benefits of vaginal births for women include shorter hospital stays, lower infection rates and quicker recovery.<sup>26</sup> Babies born vaginally also have a lower risk of respiratory problems.<sup>26</sup>

Your healthcare provider may recommend— or bring up the possibility of— a C-section for the safety of you and your baby based on medical reasons. Here are some examples of medical reasons for C-sections.

Problems during Labour	Medical Reasons for a Planned C-section
<ul style="list-style-type: none"> <li>• Labour is slow and hard or even stops completely</li> <li>• Your baby shows signs of distress, such as a very fast or slow heart rate</li> <li>• A problem with the placenta or umbilical cord</li> <li>• Your baby is too big to be delivered vaginally</li> </ul>	<ul style="list-style-type: none"> <li>• Your baby is not in a head-down position close to your due date</li> <li>• You have a problem such as heart disease that could be made worse by the stress of labour</li> <li>• You have an infection that you could pass to the baby during a vaginal birth</li> <li>• You are carrying more than one baby (multiple pregnancies)</li> <li>• You had a C-section before and you have the same problems this time; or your doctor thinks labour might cause your scar to tear and lead to a uterine rupture</li> </ul>

Source: March of Dimes, “Medical reasons for a c-section,” June 2013s.



Some doctors have recommended C-sections because they are easier to schedule and some have presented C-sections as merely an *alternative* to natural birth.<sup>27</sup> This has been a controversial discussion in medical circles. To many women this option may be appealing because it seems convenient or perhaps because they are fearful of the potential pain of labour. The decision for a C-section is between you and your doctor, but you should be informed of the facts about C-section before considering one. Here are some things you may want to consider:

- The procedure itself is major abdominal surgery. It involves an incision through the skin, abdomen, muscle and then into the uterus. It requires adjusting organs and making incisions near the bladder and bowel. This carries a risk of damage to surrounding organs, excessive bleeding, blood clots and infection.<sup>27</sup>
- Recovery from a C-section can take longer than natural childbirth. For several days, you may be limited in your movement. Because it's major abdominal surgery, you may be told that you can't lift anything heavier than your newborn for at least two weeks. You may also be restricted in driving, exercise and sexual intercourse.<sup>27</sup>
- Having a C-section may create complications with future pregnancies, so you should talk to your healthcare provider if you have plans for more than one child. Many hospitals and doctors will not perform a natural delivery if the mother has already had a C-section, meaning the decision for one C-section may be a decision for all future deliveries to be by C-section. Studies suggest that multiple C-sections pose an even greater risk to the mother.<sup>28</sup> If you and your provider agree to try a vaginal birth after caesarean (VBAC), you will have what is called a "trial of labour after caesarean" (TOLAC).<sup>28</sup> This means that you plan to go into labour with the goal to deliver vaginally. However, it's hard to predict if a VBAC will work, so you may still need a C-section.<sup>28</sup>

These are all things to discuss with your doctor so you can make an informed decision about your delivery.

### Questions to Ask Your Healthcare Provider about a C-section

- What is the benefit of a C-section over natural birth?
- What are the risks of a C-section?
- What is involved in the recovery from a C-section?
- If I plan to have more children, will having a C-section prevent me from selecting natural birth with future children?

### Safely preventing C-sections

As discussed above, a C-section may be necessary for medical reasons. However, if this is not the case and you would prefer natural childbirth, you may want to take steps to minimize the chances of C-section.

- Consider a provider with a low C-section rate. In some areas, there can be a difference between physician specialties.<sup>27</sup>
- Arrange to have continuous labour support from someone with experience, like a doula, who can help with comfort and good labour progress.
- Get appropriate amount of rest if possible at the end of pregnancy, to be ready for meeting the challenges of labour and early motherhood.
- Avoid an induction of labour unless there is a medical reason.<sup>27</sup>
- If you plan a hospital birth, work with your provider for optimal timing to go to the hospital.<sup>27</sup>
- If you had a C-section in the past, choose a healthcare provider who is supportive of VBAC and decide together what is right for you this time.<sup>28</sup>

## After Delivery

The postpartum period begins after the delivery of your baby and ends when your body has nearly returned to its pre-pregnant state. During this time, you'll progress through many changes as well, both emotionally and physically.

### Recovering from delivery

There are specific things that your healthcare provider may instruct you to do to help recover from the birth process itself. These instructions may vary depending on different considerations, such as:

- Whether you had natural childbirth or a C-section
- Whether you had tearing between your vagina and anus (perineum) or an incision (episiotomy) during natural childbirth
- How long you were in labour

### Breastfeeding and pumping milk

Breastfeeding is the natural way of providing your baby with the nutrients it needs for healthy growth and development. Breastmilk is easy to digest for most babies.<sup>29</sup> Breastmilk has hormones and disease-fighting cells called antibodies that help protect your baby from germs and illness.<sup>29</sup> This protection is unique and changes to meet your baby's needs. Breastmilk alone is sufficient to support optimal growth and development for approximately the first 6 months after birth.<sup>29</sup>

Breastfeeding also keeps you and your baby close. Physical contact is important to all newborns as it helps them feel more secure, warm and comforted. You can also benefit from this closeness. The skin-to-skin contact boosts your oxytocin levels that help breast milk flow and can help keep you calm.<sup>29</sup>

When you return to work— or just need a break from breastfeeding— you can use a breast pump to fill a container or bottle with breast milk. You can freeze breast milk so there’s always a supply available for your baby. If you’re using the breast pump at work, many breast pumps come with containers that can be used for storage.

You’ll want to refrigerate the milk as soon as possible after you express it. In general, breast milk can be stored for up to four days in the refrigerator and for three to four months in the freezer.<sup>29</sup> Remember to label the container and use the oldest milk first.

### Feeding your baby formula

There are instances where new moms are unable to breastfeed or where they have made an informed decision not to breastfeed. Similarly, some very low-birth-weight babies may not be able to breastfeed directly. In these cases, babies will require a suitable breast-milk substitute, for example, an infant formula. To determine which formula will work best for you and your baby, it’s important to talk to your health care provider about your options.

### Rest

Newborns usually do not sleep through the night, so exhaustion and sleep disruption are common problems for moms. Here are a few suggestions that may help you get a little more rest during these early weeks and months before your baby finally can sleep straight through the night:

- Sleep when your baby sleeps. This may be only a few minutes of rest several times a day, but these minutes can add up.
- Save steps and time. Have your baby’s bed near yours for feedings at night.
- Many new parents enjoy visits from friends and family, but you should not feel obligated to entertain. Feel free to excuse yourself for a nap or to feed your baby.

### Nutrition

In addition to rest, maintaining a healthy diet to promote healing and recovery is important. The weight gained during your pregnancy helps build stores for your recovery and for breastfeeding. After delivery, nutrition is important so that you can be healthy and active as well as better care for your baby. However, you may be so tired and busy that preparing a healthy meal for yourself is the last thing on your mind. Try to remember that *your* health continues to be important for your *baby’s* health. If you are breastfeeding, there is a direct connection between the nutrients in your body and what your baby receives. Even if you’re not breast-feeding, making your own nutrition a priority will help with:<sup>29</sup>

- Fatigue
- Weight management
- Constipation
- Keeping blood sugar levels even

Also, remember to continue drinking water. Dehydration can contribute to fatigue and constipation. If you’re severely dehydrated, it can affect milk production and the composition of breast milk.<sup>29</sup> It may be tempting to drink more coffee or other caffeinated beverages to deal with exhaustion, but this may not be the way to deal with fatigue.

### Losing pregnancy weight

After giving birth, you may lose about 10 pounds right away and a little more as the body fluid levels in your body continue to decrease.<sup>30</sup> Don’t expect or try to lose additional pregnancy weight right away. Gradual weight loss over several months the safest way to lose the pregnancy weight, especially if you are breastfeeding. Nursing moms can safely lose a moderate amount of weight without affecting their milk supply or their babies’ growth.<sup>30</sup>

A healthy eating plan, along with regular physical activity, might be all you need to return to a healthy weight. Try getting outside for a few minutes each day. You can begin walking and doing exercises, as advised by your health care provider. Also, try cutting back on foods with added sugars and fats, like soft drinks, desserts, fried foods and fatty meats.<sup>31</sup> Make sure you talk to your healthcare provider before you start any new diet or return to your pre-pregnancy exercise levels.

### Becoming a New Parent

You know that becoming a parent will change your life. What you may not know is how and in what ways.

Nothing can fully prepare you for the joys and challenges of parenthood, but becoming more familiar with the process of pregnancy may reduce the number of surprises.

Before the arrival of your baby, you and your partner probably had much more time for each other. Having a baby can change your priorities and give you less spontaneity and control over your lives. Once you become parents, it may become easy to get lost in your new roles. It may help to keep the following in mind as you ease into parenthood:

- Make your relationship with your partner a priority. Find time to connect – even if it looks nothing as you think it should. Sometimes that may be just sharing a cup of coffee or taking a trip to the grocery store together.
- New parents might benefit from giving each other “me” time, especially if they have other kids. Most new parents can truly benefit from having some time each week to take a walk, read a book or just sit in peace.
- Restore the balance in your relationship after your baby arrives. Try not to keep a tally of whose turn it is to change the baby’s diaper or chores around the house. Instead, try pitching in whenever needed.

## Footnotes

- 1 American Pregnancy Association, "Prenatal Care In A Multiples Pregnancy," September 2016
- 2 Centers for Disease Control and Prevention, "Pregnancy Complications," June 2016
- 3 Always consult your licensed healthcare professional before starting or changing your health regimen including medicine intake.
- 4 The American Journal of Clinical Nutrition, "Folic acid: influence on the outcome of pregnancy," May 2000
- 5 Seek advice on vaccinations from your licensed healthcare professional.
- 6 Centers for Disease Control and Prevention, "Maternal Vaccines: Part of a Healthy Pregnancy," August 2016
- 7 Centers for Disease Control and Prevention, "Advisory on Alcohol Use in Pregnancy," 2005
- 8 Surgeon General, "The Health Consequences of Smoking—50 Years of Progress," 2014
- 9 Creasy and Resnik's Maternal-Fetal Medicine: Principles and Practice, "Substance abuse in pregnancy," September 2014
- 10 World Health Organization, "Global Strategy on Diet, Physical Activity and Health," June 2015
- 11 National Institute of Child Health and Human Development, "What happens during prenatal visits?" July 2013
- 12 American Pregnancy Association, "Pregnancy And Pica," July 2015
- 13 Ministry of Health, "Guidance for Healthy Weight Gain in Pregnancy," 2014
- 14 Omar Manejwala M.D., "Craving: Why We Can't Seem to Get Enough," March 2013
- 15 Omar Manejwala M.D., "Craving: Why We Can't Seem to Get Enough," March 2013
- 16 Journal of Human Nutrition and Dietetics, "Nutritional and clinical associations of food cravings in pregnancy," June 2016
- 17 National Institute of Diabetes, Digestive and Kidney Disorders, "Gas in the Digestive Tract," January 2016 Canadian Family Physician, "Treating constipation during pregnancy," August 2012
- 18 Always consult your licensed healthcare professional before starting or changing your health regimen including medicine intake.
- 19 Source: U.S. Department of Agriculture, Agricultural Research Service, "USDA National Nutrient Database for Standard Reference, Release 27," August 2015
- 20 The Journal of Perinatal Education, "Exercise During the Childbearing Year," January 2000
- 21 World Journal of Diabetes, "Prescribing physical activity to prevent and manage gestational diabetes," December 2013
- 22 The BMJ, "Depression during pregnancy," May 2007
- 23 U.S. Department of Health and Human Services, "Pregnancy: Stages of pregnancy," September 2010
- 24 The American College of Obstetricians and Gynecologists, "How to Tell When Labor Begins," May 2011
- 25 The American College of Obstetricians and Gynecologists, "Preterm (Premature) Labor and Birth," November 2016
- 26 World Health Organization, "WHO Statement on Caesarean Section Rates," 2015
- 27 Obstetrics & Gynecology, "Labor Induction and the Risk of a Cesarean Delivery Among Nulliparous Women at Term," July 2010
- 28 International Cesarean Awareness Network, "Issues and Procedures in Women's Health - Vaginal Birth After Cesarean (VBAC)," January 2014
- 29 American Pregnancy Association, "What's In Breast Milk?," August 2015
- 30 Obstetrics & Gynecology, "Excess Pregnancy Weight Gain and Long Term Obesity: One Decade Later," August 2002
- 31 American Journal of Clinical Nutrition, "Poor nutrition during pregnancy and lactation negatively affects neurodevelopment of the offspring: evidence from a translational primate model," August 2013

---

The information and materials included in MetLife's Health and Wellness Information Library, including all toolkits, modules, template communications, text, charts, graphics and other materials, (collectively, the "Content") are intended to provide general guidance on health and wellness matters and are not, and should not be relied on as, medical advice. While the Content is based on resources that MetLife believes to be well-documented, MetLife is not responsible for the accuracy of the Content, and you rely on the Content at your own risk. Each person's condition and health circumstances are unique, and therefore the Content may not apply to you. The Content is not a substitute for professional medical advice. You should always consult your licensed health care professional for the diagnosis and treatment of any medical condition and before starting or changing your health regimen, including seeking advice regarding what drugs, diet, exercise routines, physical activities or procedures are appropriate for your particular condition and circumstances.